

PATENT SPECIFICATION



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429,660

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COMPLETE SPECIFICATION

Improvements in or relating to Electric Incandescent Lamps having at least One Screened Filament

We, LAMPE YVEL, AUTO-LAMPE & CIE, ANCIENS, ETABLISSEMENTS LÉO LÉVY ET ALFRED MONNIER, a Limited Liability Company, organised and established under the laws of the French Republic, having our seat and Office at 11/12, Rue Torricelli, Paris, France, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

It is well known to use two-filament incandescent lamps in a parabolic reflector, for example for motor cars. In this case, one of the filaments serves for the main illumination ahead of the car and the other yields a non-glaring illumination in the vicinity of the motor car. For this purpose, the bottom part of the bulb, when the incandescent lamp is mounted to occupy a horizontal position, is provided with means for diffusing light in all directions, such, for example, as small projections or protuberances forming together a large number of small lenses. The upper part of the bulb may have formed on it, for example, corrugations. The shape of these may be governed by the intersections of meridian planes with the bulb so that only a horizontal diffusion of light is obtained.

Diffused luminous rays should be prevented from falling on to the bottom part of the reflector. This may result in the production of luminous rays leaving the reflector in an upward direction which may thus give rise to dazzling. For this reason the lamp referred to hereinbefore may be constructed in such manner that a band of clear glass is left on the two lateral sides of the bulb adjacent the horizontal meridian plane through the axis of the lamp.

For the purpose of obviating dazzling, it is, however, also preferable that in all the planes that pass through the axis of the lamp the light diffusing properties should be utilised. This applies particularly to such planes adjacent the horizontal meridian plane.

According to the invention, for this purpose the bulb of an electric incandes-

cent lamp containing at least one filament which is partly surrounded by an internal screen arranged within the lamp is divided into two parts by an ideal meridian plane. That part of the bulb which is subjected to radiation by the screened filament is provided with corrugations following substantially the lines of intersection of meridian planes with the bulb. The said system is circumscribed by two portions on which the corrugations follow substantially the lines of intersection of planes perpendicular to the axis of the lamp with the bulb.

The bulb portion which is not subjected to radiation by the filament which is associated with the screen may be provided with diffusing means. The latter bulb portion may be separated by narrow band-shaped portions of clear glass from the bulb portion on which the corrugations follow the intersections of planes normal to the axis of the lamp. Similarly, such a band of clear glass may be formed extending along a meridian of the lamp in the middle of the bulb portion which is provided with corrugations extending along the intersections of meridian planes.

The pole of the lamp opposite the cap of the lamp may also be provided with diffusing means. The diffusing means may be of different types. Granulations, small projections or protuberances together forming a large number of small lenses may be used. It is also possible to frost the relative parts of the bulb.

In order that the invention may be clearly understood and readily carried into effect one embodiment thereof will now be described more fully with reference to the accompanying drawing, in which

Fig. 1 is a side view of the bulb of an incandescent lamp according to the invention, and

Fig. 2 is an end elevation of the said bulb.

Referring to the Figures, *a* designates the network of corrugations formed on the lower half of the bulb and forming together a large number of small lenses.

A portion of the upper side of the bulb

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through which the rays from the partly screened filament passes has formed on it corrugations *b* extending substantially according to intersections of the bulb with meridian planes. The front side of the bulb has a small portion *c* which is shaped, for example, in the form of a segment of a sphere and which may be frosted or provided with a system of fine corrugations. The corrugations designated by *d* form the vertical corrugations according to the invention. The bulb has in addition clear portions *e* generally formed on the edges of the bottom of the bulb only. There may be provided in addition a clear portion *f* on the upper side of the bulb.

Vertical corrugations *d* may merge or not as desired into the corrugations *b*. On the bottom side these vertical corrugations are circumscribed by the horizontal meridian plane X-X as shown in the Figures or these corrugations may end at a small distance above or below this plane depending on the form of the portion *e*.

Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim is:—

1. An electric incandescent lamp, provided with a bulb containing at least one filament which is partially surrounded by an internal screen, wherein the bulb is divided by an ideal meridian plane into two parts and that parts of the bulb which is subjected to radiation by the screened filament is provided with corrugations following substantially the lines of intersection of the bulb with meridian planes and circumscribed by two portions having corrugations extending substantially according to curves of intersection of planes perpendicular to the axis of the lamp.

2. An electric incandescent lamp as claimed in claim 1, wherein the bulb portion which is subjected to radiation by the screened filament is provided at the edges with zones of clear glass, whereas the bulb portion which is not subjected to radiation by the screened filament is provided with diffusing means.

3. An electric incandescent lamp as claimed in claim 1 or 2, wherein the bulb portion on which the corrugations are

formed is provided in the middle with a narrow band of clear glass which extends along a meridian of the lamp.

4. An electric incandescent lamp as claimed in claim 1, 2 or 3, wherein the pole of the lamp opposite the cap has formed on it a circular part provided with diffusing means.

5. A bulb for electric incandescent lamps having at least one filament partly surrounded by a screen which is divided into two parts by an ideal meridian plane, the bulb portion located on one side of this meridian plane being provided with corrugations following substantially the curves of intersection of meridian planes with the bulb surface, said portions being circumscribed by two portions on which the corrugations follow substantially the lines of intersection of planes which are perpendicular to the longitudinal axis of the bulb.

6. A bulb as claimed in claim 5, wherein diffusing means are formed on the other side of the ideal meridian plane and two zones of clear glass are formed adjacent the intersection of this ideal meridian plane with the bulb.

7. A bulb for electric incandescent lamps as claimed in claim 5 or 6, wherein the bulb portion on which the corrugations are arranged following the lines of intersection of the bulb with meridian planes is provided in the middle with a narrow band of clear glass which extends along a meridian of the lamp.

8. A bulb for electric incandescent lamps as claimed in claim 5, 6 or 7, wherein the pole of the bulb which is diametrically opposed to the cap of the bulb has formed on it a circular part provided with diffusing means.

9. Electric incandescent lamps substantially as described and as illustrated in the accompanying drawing.

10. Bulbs for electric incandescent lamps substantially as described and illustrated in the accompanying drawing.

Dated this 16th day of July, 1934.

DICKER, POLLAK & MERCER,
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20 to 23, Holborn, London, E.C.1.
Agents for the Applicants.

[This Drawing is a full-size reproduction of the Original.]

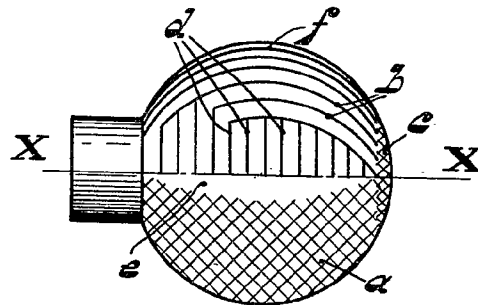


Fig. 1

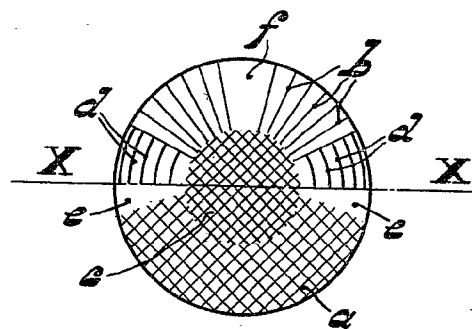


Fig. 2